

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

Introduction

AB 1609 Study Requirements

AB 1609, passed in 2001, required an evaluation of the extent to which the CAHSEE meets standards for development and use for the Class of 2004. The new study reported here examined the test development process and implementation of standards-based instruction as required by AB 1609.

Our review of the test development process was presented in Chapter 2 above. Chapters 3 through 5 of this report describe results and conclusions from the survey of instruction. Information from the survey was supplemented by visits to a smaller sample of schools. Principals and teachers at each site were interviewed to elicit information to confirm and expand on the information obtained through the surveys. Data from the CAHSEE administrations also were used in assessing standards-based instruction. Passing rates were computed for each of the state's 1,843 high schools and used in assessing the effectiveness of standards-based instruction in each high school together with its associated middle and elementary schools.

In this final chapter, we summarize key findings from the study and discuss recommendations for consideration by the State Board of Education as they deliberate whether to continue or defer the CAHSEE requirement.

Main Findings

Test Development

The most widely accepted standards for test development and use were established by joint committees of the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME) and published in *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999). In Chapter 2, we listed all of the standards in this document that are relevant to the CAHSEE. Results from the ongoing evaluation are used to document the extent to which each of the standards is met.

Results of our review of these standards led to the first general finding:

General Finding 1: The development of the CAHSEE meets all of the test standards for use as a graduation requirement.

One particularly important standard is 13.5, which requires that students have adequate opportunity to learn the material covered by tests used to make important decisions about them. As described in the balance of this report, instruction in some schools was not closely aligned to the California Content Standards at the time the Class of 2004 was in grades 7 through 9. However remedial programs, providing additional opportunities to learn

the required material, have been created in nearly all high schools. In the end, the Board and others must decide whether these opportunities are sufficient.

One other Standard, 13.7, requiring that important decisions not be based on a single test score, is also open to some interpretation. Students are allowed multiple opportunities to pass the exam. In addition, the original CAHSEE legislation provides for creation of additional ways that a student might demonstrate mastery of the required skills. Consideration of other ways students might meet the CAHSEE requirement could further strengthen California's case for compliance with this standard.

The focus of the current investigation was on whether the CAHSEE meets standards for use as a high school graduation requirement. There are, of course, other possible or contemplated uses of the CAHSEE score information. These include use of the CAHSEE for school accountability in the state's academic performance index (API), use of the CAHSEE scores together with additional performance level standards to satisfy requirements of the No Child Left Behind legislation, and diagnostic interpretation of subscores and score gains. Further review and documentation would likely be required to verify that these uses of the CAHSEE are in full compliance with the *Standards*. Specific issues with some of these uses are noted in Chapter 2.

Standards-Based Instruction

The Impact of the CAHSEE on Instruction

General Finding 2. The CAHSEE requirement has been a major factor leading to dramatically increased coverage of the California Content Standards at both the high school and middle school level and to development or improvement of courses providing help for students who have difficulty mastering these standards.

Chapter 3 of this report describes the profound impact that the CAHSEE requirement has had on standards-based instruction. At the high school level, coverage of the California Content Standards assessed by the CAHSEE has increased steadily from 1999, when only about 20 percent of the schools reported covering at least three-quarters of the standards, to the current school year, in which more than 80 percent of the schools reported at least 75 percent coverage. Changes to instruction are also indicated by the number of new courses started in the past 3 years, the number of existing courses that have adopted new textbooks in this time period, and the increased alignment of these courses and texts to content standards. Alignment at the middle school has shown similar improvement.

An even more important indication of the impact of the CAHSEE requirement is the number of new remedial or supplemental courses, many specifically targeting students who do not initially pass the CAHSEE. Schools have always worked to help students who did not master important standards the first time around, but the CAHSEE has expanded these efforts very considerably. New programs also include courses designed specifically for English learners and special education students. Principal and teacher interviews suggest that the CAHSEE requirement was a major factor in driving schools to increase alignment and develop programs for students who were not mastering key standards.

Effectiveness of Instruction for the Class of 2004

General Finding 3. Available evidence indicates that many courses of initial instruction and remedial courses have only limited effectiveness in helping students master the required standards.

Chapter 4 of this report presents evidence for the effectiveness of standards-based instruction for the Class of 2004. The general conclusion from these analyses is that instruction throughout the state has not been effective for all students, particularly in mathematics. In half of the state's high schools fewer than 50 percent of the Class of 2004 has passed the mathematics portion of the CAHSEE.

High school passing rates are closely related to the reported coverage of the CAHSEE standards in the high school curriculum. For ELA, 100 percent of schools in the survey where high levels of content coverage were implemented early (just subsequent to passage of the CAHSEE legislation) had passing rates of 75 percent or greater. In comparison, only 59 percent of schools that have not yet implemented high levels of coverage had ELA passing rates this high. For mathematics, the percentage of schools with high passing rates ranged from 100 percent for early implementers down to only 22 percent for schools that have not yet implemented high levels of alignment between curriculum and content standards.

Student Preparation

General Finding 4. Lack of prerequisite skills may prevent many students from receiving the benefits of courses that provide instruction in relevant content standards. Lack of student motivation and lack of strong parental support may play a contributing role in limiting the effectiveness of these courses.

Survey and interview results indicated a major reason that courses were not more effective in helping students master the required standards was inadequate student preparation. Many students participating in both initial and remedial instruction did not have essential prerequisite skills. For supplemental and remedial courses, more than half the teachers reported that most of their students did not yet have prerequisite skills; among teachers of remedial courses targeting special education students, 72 percent gave this response.

A number of other reasons for the limited effectiveness of current instruction were explored in the survey and interviews. Low student attendance and motivation were frequently cited as contributing factors. Students do not always take advantage of remedial activities that are offered, particularly summer programs. Both survey responses and direct evidence for a limited number of courses suggest, however, that only 20 to 30 percent of the students who took these summer courses were able to pass on a subsequent attempt. Many of the interview respondents also stated that the CAHSEE requirement has had some influence on student motivation.

We also investigated the possible impact of teacher qualifications and professional development on the effectiveness of standards-based instruction. There was no clear evidence that teacher qualification was an important factor. Few schools made extensive use of

teachers with emergency credentials and the majority of courses targeting English learners or special education students were taught by teachers who were experienced with these populations. There was some indication that the qualifications of mathematics teachers could be improved. Mathematics teachers had lower rates of participation in professional development targeted to teaching the standards and as many as 25 percent of high school mathematics courses targeting special education students are being taught by teachers without appropriate credentials. In general, however, those who teach courses targeting English learners and special education students have considerable experience with these populations.

Potential Improvements for Subsequent Classes

General Finding 5. Many factors suggest that the effectiveness of standards-based instruction will improve for each succeeding class after the Class of 2004, but the speed with which passing rates will improve is currently unknown.

Recent changes in standards-based instruction offer considerable hope for improved effectiveness for the Class of 2005 and beyond. Coverage of the content standards has increased at both the middle and high school levels. New, aligned textbooks have been introduced to courses at these levels. Teachers are continuing to receive professional development aimed at guiding them in teaching the content standards. The Class of 2004 did not have the advantage of most of these changes when they were in middle school. Efforts to overcome this lack have been of limited effectiveness in many high schools. Students in the Class of 2006 and beyond are receiving considerably more benefit from the adoption of textbooks aligned to the standards and of professional development efforts for teachers.

Potential improvements in the effectiveness of instruction in mathematics are particularly significant. The Algebra requirement was not adopted until students in the Class of 2004 were already in high school. Many students required extensive instruction in prerequisite skills before instruction in Algebra could be effective. Feeder school principals report significant increases in the proportion of students taking some Algebra by the 8th grade. The full scope of the California Content Standards, from elementary through high school, has been implemented for students in more recent classes.

While the potential for improvement in the effectiveness of instruction for subsequent high school classes is great, the rate at which this improvement will lead to increased mastery of the CAHSEE standards is unknown. Current funding issues raise questions as to the extent to which schools will be able to continue to support remedial courses and to provide training and professional development for those who teach these courses. Initial passing rates for the Class of 2005 should be available in June 2003.

Recommendations

The State Board of Education must decide by August 1, 2003 whether to continue to require students in the Class of 2004 to pass the CAHSEE in order to earn a diploma. In reaching a decision on this issue, the Board must weigh competing risks and benefits. A decision to continue the requirement will maintain the momentum for continued

improvements to instruction and signal a commitment to ensuring that all students achieve essential skills. Continuing the requirement will also likely lead to an intensive debate over the adequacy of instructional opportunities and fairness to specific groups within the Class of 2004. Such a debate would take time and resources away from the primary focus on educating students.

The values assigned to potential risks and benefits are matters of public policy, not of science. Therefore, we cannot recommend what the Board's decision should be. Instead, we offer several recommendations, based on findings from the study, for factors to consider in implementing either a decision to continue or a decision to defer the CAHSEE requirement for high school graduation.

Continuing the CAHSEE Requirement

If the requirement is continued, what options might be considered to lessen concerns over fairness stemming from inadequate or unequal opportunities to learn the required standards? Alternatives for increasing the passing rates, providing additional ways of meeting the requirement, and providing alternatives for students who cannot earn a diploma are discussed outlined.

Increasing the Passing Rate

The Board might consider a retroactive lowering of the passing standards for the Class of 2004. For mathematics, the current standard requiring students to answer 55 percent of the questions in the initial test form correctly is already relatively low. It may not be credible to lower this rate very much further.

Another approach might be to reduce the content covered by the CAHSEE, eliminating sections giving current students the most difficulty. This option is also limited, as there are difficult questions for each different content area. In mathematics, for example, it is not just Algebra that gives students difficulty. There are difficult questions in each of the five major content strands. In addition, it would be difficult to change test content retroactively for the Class of 2004.

One other way passing rates might be increased would be to adopt a compensatory approach where achievement above the minimum in one subject could compensate for some deficiency in achievement in the other subject. For example, a total score of 700 could be required rather than requiring students to obtain scores of 350 or higher on each portion of the CAHSEE. The rationale for this approach is that students with exceptional skill in mathematics [English-language arts] might not need as much skill in English-language arts [mathematics] to be successful.

It might be difficult to implement a compensatory approach for the Class of 2004, since many students took the two portions of the exam at different times, and no state-level identification for students exists for linking data. Primary responsibility for determining whether students have passed the CAHSEE would fall to the districts, where retroactive adjustments may be feasible. Table 6.1 shows that the overall passing rate would have increased about 13 percent in the first administration of the CAHSEE (March 2001) where

nearly all students completed both portions. The compensatory approach might more easily be used with subsequent classes that could be required to take both portions in each administration until they passed the entire exam.

Table 6.1 Percent of Students Passing the CAHSEE in March 2003

Student Groups	Percent Passing Under Current Rules*:			Percent with Total > 700
	ELA	Mathematics	Both	
All Students	66%	46%	43%	56%
African Americans	52%	25%	23%	37%
Hispanics	50%	26%	23%	36%
Econ. Disadvantaged	48%	27%	23%	35%
English Learners	31%	18%	12%	20%
Special Education	24%	14%	10%	16%

* Based on students who completed both portions.

Additional Ways of Demonstrating Mastery

The Board might also give further consideration to other ways that students could demonstrate mastery of the content standards. Some states (e.g., Indiana, Massachusetts, Ohio) have policies allowing students who pass (or earn high grades in) relevant courses and complete any required remedial courses to petition for a waiver if they do not pass the graduation exam.

Some states also allow additional forms of assessment, such as evaluation of portfolios of student work, for severely handicapped students unable to take the graduation test. A key difficulty with this approach is making sure that the same high standards are applied to passing criteria for these alternative assessments.

Options for Students Who Cannot Earn a Diploma

Finally, concerns about the CAHSEE could be decreased if there were additional options for recognizing the achievement of students who are unable to meet the required standards. School districts could decide to issue alternate certificates of completion to motivate students who might be unable to reach passing levels and to recognize students who demonstrate commendable effort despite failing to master the standards or who are unable to test successfully. The legislature might consider state-wide options for recognizing levels of achievement below that required for a diploma.

Deferring the CAHSEE Requirement

If the CAHSEE requirement is deferred, the biggest concern will be maintaining momentum for improved instruction in the content standards and the motivation of students to take advantage of this instruction. Options that may be considered include:

- Offering a diploma seal or certificate for students who pass the CAHSEE and/or noting satisfaction of the CAHSEE requirements on high school transcripts.

- Allowing or encouraging districts to include the CAHSEE as part of their own graduation requirements. This option might involve releasing one or more forms of the CAHSEE for district use, if testing beyond the 10th grade is not continued.
- Continuing to use the CAHSEE for school accountability in the Academic Performance Index and in meeting requirements under No Child Left Behind legislation.

The Class of 2005 has now taken the CAHSEE as 10th graders. If the requirement is deferred past the Class of 2006, the Board must decide whether to offer the CAHSEE next year at all. The current Academic Performance Index, used for accountability, and the requirements of the No Child Left Behind act dictate continued administration of the CAHSEE to 10th graders.

We also recommend that California continue to allow students who do not pass the exam in the 10th grade to have subsequent opportunities to take it during the 11th and 12th grades. Such an approach would be essential to continued use for school accountability and would maximize options for use by districts in identifying students who have not mastered the required standards and recognizing those who have.

